REMARKS

Claims 1-7 and 10-21 are pending in the application.

Claims 1-7 and 10-21 stand rejected.

Claims 1, 10 and 15 have been amended as indicated above.

Reconsideration of the Claims is respectfully requested.

No new matter has been added.

1.   Objections

Claim 1 was objected to as not having proper mark-ups. Claim 1 has been amended to indicate the mark-up as appropriate.

2.   Rejection under 35 U.S.C. 103

Claims 1, 7, 15 and 21-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0067704, to Ton ("Ton") in view of Perkins, IP MOBILITY SUPPORT (October 1996) ("Perkins I").

Claims 2, 3, 10, 11, 16 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ton in view of Perkins as applied to Claims 1 and 15 above, and further in view of U.S. Patent Application Publication No. 2002/0078238, to Troxel ("Troxel").

Claims 4 and 12 were rejected under 35 USC 103(a) as being unpatentable over Ton in view of Perkins I and further in view of Troxel as applied to Claims 2 and 10 above, and further in view of Jue et al. ("Design & Analysis of Replicated Server Architecture for Supporting IP-Host Mobility") ("Jue"), and even further in view of Tiedmann et al., U.S. Patent No. 6,615,050 ("Tiedmann").

Claims 5-6 and 13-14 were rejected under 35 USC 103(a) as being unpatentable over Ton in view of Perkins I and further in view of Troxel as applied to Claims 2 and 10 above, and further in view of Perkins, "MOBILE NETWORKING THROUGH MOBILE IP (1998) ("Perkins II") and U.S. Patent No. 5,590,092, to Fehnel ("Fehnel").

Claim 18 was rejected under 35 USC 103(a) as being unpatentable over Ton in view of Perkins I and further in view of Troxel as applied to claim 17 above, and further in view of Jue.

Claims 19 and 20 were rejected under 35 USC 103(a) as being unpatentable over Ton in view of Perkins I and further in view of Troxel as applied to Claim 17 above, and further in view of Perkins II.

Applicant respectfully submits that the amended claims as presented overcome the rejection under Section 103. Also, Applicant respectfully submits that the claims as presented mirror those of the European sister case, which issued June 1, 2010 as EP 1 438 809 B1. This European sister case issued over the cited references of *Perkins I*, *Perkins II*, and *Jue*, which are cited in the Final Office Action in the rejection under Section 103 to the instant case.

A.   Applicant respectfully submits that a *prima facie* showing of obviousness has not made with respect to Applicant's amended claims

The Final Office Action submits that "Applicant's arguments with respect to claims [1-7 and 10-21] have been considered but are moot in view of the new ground(s) of rejection necessitated by the amended language and/or new limitations. In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations)." (Final Office Action at page 26).

Applicant's Independent Claims 1 and 15 were rejected under the hypothetical combination of Ton in view of *Perkins I*. Applicant's Independent Claim 10 was rejected under the hypothetical combination of Ton in view of *Perkins I*, and further in view of Troxel.

B.   Applicant's subscriber unit relates to operation within a cellular system and avoiding network preclusion upon failure to register with a home agent

For background, Applicant's specification notes that "[b]ecause each subscriber unit has a corresponding home agent, during initial registration operations, the subscriber unit must register with its assigned home agent. . . . However, because the IP address of its assigned home agent is hard-coded in its memory, if the assigned home agent is not operational (not an uncommon event) when the subscriber unit attempts registration, a failure in registration results [in which] the subscriber unit is [precluded] from receiving IP communication service from its cellular system provider." (Specification at page 2, *ll.* 13-27, through page 3, *ll.* 1-2).

The cited references do not teach or suggest initial programming or storage of a plurality of home agents in a subscriber unit prior to an initial registration attempt.

1.   **Ton** *designates other Home Agents upon post-attachment of the Mobile Node with a Foreign Agent*

Based upon knowledge of Applicant's disclosure, the Final Office Action, submits aspects of untaught aspects of the references to apply to Applicant's claims.

For example, in reference to Ton, the Final Office Action submits that "where the subscriber unit can receive an advertisement to be aware of another home agent in addition to the primary home agent that is pre-assigned to the subscriber unit as evidenced by the fact that one of ordinary skill in the art would clearly recognize (see pg. 3, [0036], lines 9-12; 0039, lines 3-41) . . . ." (Final Office Action at p. 3). An Advertisement under Ton is an "advertisement message constructed by attaching a special Extension to a router advertisement . . . message." (*Perkins I* at p. 5; *see* Ton ¶ 0038).

As understood, Ton was cited by the Final Office Action for general Home Agent discussion purposes, without providing a suggestion or motivation, or elements, for the avoidance of registration failure as set out in Applicant's claims.

The portion of Ton referred to in the Final Office Action recites that "[w]hen visiting another network a MN will register with that network through a Foreign Agent ("FA"). The network will provide a number of Home Agents through which the MN may register, although the MN will be statically configured [by the network operator] to primarily register with a given HA." (Ton ¶ 0036). Ton recites that each "Mobile Node will have an IP address and be attached to the network through a Home Agent. When visiting another network a Mobile Node will register with that network through a Foreign Agent. The network will provide a number of Home Agents thorugh which the Mobile Node may register, although the Mobile Node will be statically configured [by the network operator] to register with a given Home Agent." (Ton ¶¶ 0023, 0028). That is, additional Home Agents in Ton are provided post-attachment.

For further example, Ton recites "attached to the network," but does not recite a failed attachment. Ton instead recites a "network will provide a number of Home Agents through which the Mobile Node may register, although the Mobile Node will be statically configured [by the network operator] to register with a given Home Agent." (Ton ¶ 0023).

Ton recites post-attachment redundancy. After the MN is registered, and the primary Home Agent finds a less busy Home Agent, then it provides the MN with "an additional Mobile IP extension is added to the registration reply message."

2.   *the home agent discovery of* **Perkins I** *does not recite initially programming addresses for a plurality of home agents in a subscriber unit prior to an initial registration attempt, and subsequent access based upon failed initial registration*

The Final Office Action submits that "Perkins clearly discloses having the feature wherein the plurality of addresses for the home agents stored in the subscriber unit is programmed by a service provider prior to delivering the subscriber unit to its subscriber (see pgs. 34-35, section 3.6), where a mobile node is configured with IP addresses." (Final Office Action at page 6).

Applicant respectfully submits that *Perkins I* does not teach or disclose, for example, initially programming addresses for a plurality of home agents to avoid registration failure that precludes the subscriber unit from receiving Internet Protocol (IP) communications.

a.   Perkins I *recites Internet network connections, not cellular systems*

The home agent of *Perkins* is not the home agent of the cellular system of Applicant's claims. Perkins recites that its "home agent sends datagrams destined for the mobile node thorugh a tunnel to the care of address. After arriving at the end of the tunnel, each datagram is then delivered to the mobile node." (*Perkins I* at p. 1). Also, *Perkins I* relates to the IP version 4 protocol, which assumes that a node's IP address uniquely identifies the node's point of attachment to the Internet. . . . This document defines such a mechanism [to accommodate node mobility within the Internet." (*Perkins I* at p. 2). In contrast, Applicant's claims recite registering a subscriber unit upon initial use within a cellular system.

For example, *Perkins I* recites that "Mobile IP facilitates node movement from one Ethernet segment to another as well as it accommodates node movement from an Ethernet segment to a wireless LAN, as long as the mobile node's IP address remains the same after such a movement." (*Perkins I* at p. 3).

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      b.   *Perkins I does not recite a failed initial registration of a subscriber unit*

The referenced language of Perkins refers to an address, not a plurality of addresses for a primary home agent and a plurality of secondary home agents.

The protocol of *Perkins I* recites that a "mobile node MUST be configured with its home address, a netmask, and a mobility security association for each home agent. In addition, a mobile node MAY be configured with *the IP address* of one or more of its home agents; otherwise, the mobile node MAY *discover* a home agent using the procedures described in Section 3.6.1.2." (*Perkins I* § 3.6 ("mobile node considerations")). The configuration is not referred to as initially programming addresses that include addresses for a plurality of home agents prior to an initial registration attempt.

The text of *Perkins I* cited in the Final Office Action does not refer to "failed registration attempts" because if a home agent is unknown to the IP mobile device, it engages in a "discovery" mode, in which, through the registration procedure, a "mobile node is [enabled] to: . . . discover the address of a home agent if the mobile node is not configured with this information." (Perkins I § 3 at page 24 ("Registration")). Discovery is a post-attachment activity.

Perkins I recites post-attachment activity in the Internet under the IP v 4 environment, not an avoidance of registration failure that precludes a subscriber unit from receiving Internet Protocol (IP) communications. Applicant respectfully submits that Perkins does not apply to the context of a subscriber unit that operates in a cellular system as set out in Applicant's claims.

C.   the "statically pre-assigned" Home Agent of *Ton* and the Internet-based home agent discovery of *Perkins I* do not address failed initial registration that precludes network access, as contrasted with Applicant's claims

The cited references of Ton and *Perkins I* recite Internet-based attachments, without reference to a subscriber unit in a cellular system, in which registration is based upon initially programming addresses for a plurality of home agents prior to an initial registration to a cellular system, in which subscriber units communicate wirelessly with base stations that couple serviced

communications to the public switched telephone network (PSTN), the Internet, and/or to other communication networks.

Further, apart from not reciting cellular system as set out in Applicant's claims, neither Ton nor Perkins recites initially programming addresses for a plurality of home agents. Secondary home agents are added post-attachment to the Internet-based network of these devices.

In contrast, Applicant's Independent Claim 1 recites, *inter alia*, a "method for registering a subscriber unit upon initial use within a cellular system, the method comprising: initially programming addresses for a plurality of home agents in the subscriber unit *prior to an initial registration attempt with a primary home agent to avoid registration failure that precludes the subscriber unit from receiving Internet Protocol (IP) communications*, wherein the plurality of home agents includes the primary home agent and a plurality of secondary home agents; attempting the initial registration attempt with the primary home agent; when the subscriber unit fails to achieve registration via the initial registration attempt with the primary home agent of the plurality of home agents, selecting a secondary home agent from the plurality of secondary home agents; and attempting registration with the selected secondary home agent."

Applicant's Independent Claim 15 recites, *inter alia*, a "subscriber unit that operates within a cellular system, the subscriber unit comprising: an antenna; a radio frequency unit coupled to the antenna; and at least one digital processor coupled to the radio frequency unit that executes software instructions causing the subscriber unit to: retrieve addresses, stored in the subscriber unit, for a plurality of home agents in the subscriber unit *for an initial registration attempt with a primary home agent to avoid registration failure that precludes the subscriber unit from receiving Internet Protocol (IP) communications*, wherein the stored address for the plurality of home agents includes a primary home agent and a plurality of secondary home agents *which have been initially stored prior to the initial registration attempt*; attempt the initial registration with the primary home agent; *when failing to achieve registration* with the primary home agent *via the initial registration attempt*, selecting a secondary home agent from the plurality of secondary home agents; and attempt registration with the selected secondary home agent."

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Applicant respectfully submits that there is no suggestion or motivation to modify the post-registration redundancy device of Ton in view of the protocol enhancements of *Perkins I*, to achieve Applicant's invention recited in the method of Independent Claim 1 or the subscriber unit of Independent Claim 15, much less teach or suggest all the claim limitations.

Applicant respectfully submits that a *prima facie* case of obviousness has not been made out with respect to Claim 1 and Claims 2-7 that depend therefrom, and with respect to Claim 15 and Claims 16-21 that depend therefrom, by the hypothetical combination of Ton in view of *Perkins I*, and requests withdrawal of the rejection.

Further, Applicant respectfully submits that the hypothetical combination of the post-registration redundancy device of Ton in view of the protocol enhancements of *Perkins I*, does not result in all of Applicant's claim limitations as set out in its Claim 1 and Claims 2-7 that depend therefrom, and as set out in its Claim 15 and Claims 16-21 that depend therefrom.

D.   Addition of further references to the hypothetical combination of Ton and Perkins do not overcome the lack of a *prima facie* showing of obviousness

Claims 2 and 3 depend directly or indirectly from Independent Claim 1. Claims 16 and 17 depend directly or indirectly from Independent Claim 15.   Because the hypothetical combination of Ton in view of *Perkins I*, does not substantiate a *prima facie* case of obviousness as to Claims 1 and 15, Applicant respectfully submits that a *prima facie* showing of obviousness is not substantiated through the addition of Troxel as to claims 2, 3, 10, 11, 16, and 17.

The Final Office Action recites that "the examiner maintains that the feature rank ordering the plurality of home agents was well know in the art, as taught by Troxel. In the same field of endeavor, Troxel discloses the feature rank ordering the plurality of home agents (see pg. 4, [0051]) . . . ." (Final Office Action at p. 10).

The cited text of Troxel recites that "a mobile node 1110c may be capable of communicating with more than one foreign agent 112a, 112b. In fact, in some implementations, a mobile node 110c ranks foreign agents 112a, 112b . . .and establishes a local binding with the highest ranking agent." (Troxel ¶ 0051). The ranking is based upon local bindings, and upon foreign agents for the local bindings. The bindings are based upon Troxel's recitation that

"[s]ometimes, however, communication between the foreign and home agents may fail [after the attachment], for example, due to problems at the home agent or routers carrying messages between home and foreign agents. In such circumstances, the mobile node may find itself isolated and unable to receive IP (Internet Protocol) addressed messages. A variety of techniques, described below, can enable a mobile node to continue receiving IP addressed messages from other network nodes even when the mobile node fails to establish, or loses, connectivity with a home agent. In addition to preserving incoming message delivery, the techniques may place minimal, if any, burden on network resources." (Troxel ¶ 0031). That is, Troxel recites a workaround for a data path, not registration of the device of Troxel with a secondary home agent.

For example, under Troxel, data communication can be tunneled through other network components based on remote bindings, in which "when the mobile node 110a sends a message to a correspondent node 180a and expects a reply, the mobile node 110a can also send the node 180 the mobile node's IP address and the IP address of its foreign agent 112. Thereafter, a correspondent node 180a can tunnel messages to the mobile node's 110a foreign agent 112 for de-tunneling and delivery to the mobile node 110a. The tunneled message need not pass through any part of the mobile node's 110a home network 104b." (Troxel ¶ 0038; *see* Troxel ¶ 0048).

In contrast to the cited references, Applicant's Independent Claim 10 recites a "method for registering a subscriber unit upon initial use within a cellular system, the method comprising: initially programming addresses for a plurality of home *agents in the subscriber unit prior to an initial registration attempt with a primary home agent to avoid registration failure that precludes the subscriber unit from receiving Internet Protocol (IP) communications*, wherein the plurality of home agents includes the primary home agent and a plurality of secondary home agents; attempting the initial registration attempt with the primary home agent; when the subscriber unit fails to achieve registration via the initial registration attempt with the primary home agent of the plurality of home agents, selecting a first secondary home agent from the plurality of secondary home agents based upon a rank ordering of the plurality of secondary home agents; and attempting registration with the selected secondary home agent."

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Applicant respectfully submits that there is no suggestion or motivation for the hypothetical combination of post-attachment devices of Ton and Perkins that would arrive at Applicant's claimed invention. and further in view of tunneling based upon foreign agent ("FA") ranking device of Troxel, to achieve Applicant's invention recited in the method of Independent Claim 10, much less teach or suggest all the claim limitations.

Applicant respectfully submits that a *prima facie* case of obviousness has not been made out with respect to Claims 2 and 3, which depend directly or indirectly from Independent Claim 1, Claims 10 and 11 that depend therefrom, and Claims 16 and 17 that depend directly or indirectly from Independent Claim 15, by the hypothetical combination of Ton in view of *Perkins I*, in further view of Troxel and requests withdrawal of the rejection.

These remaining rejections of the claims that depend from Applicant's Independent Claims are respectfully traversed in that, as shown below, there is no suggestion or motivation to modify the post-registration redundancy device of Ton in view of the protocol enhancements of *Perkins I*, to achieve Applicant's invention of its Independent Claims 1 and 15, and further in view of the foreign agent ranking device of Troxel with regard to Independent Claim 10, to achieve Applicant's claimed invention.

Applicant also respectfully submits that the cited references do not teach or suggest all of Applicant's claim limitations, such as application in a cellular system, failure of an initial registration attempt, pre-initial registration programming of home agents in a subscriber unit, et cetera.

E.   Additional References cited against Applicant's dependent claims based upon post-registration activity and/or unrelated to context of Applicant's claims

Other references cited by the Final Office Action to Applicant's dependent claims also are based upon post-registration activity, or unrelated to Applicant's claims, in that certain elements are selected regardless of context.

For example, Jue recites "[m]obility supporting IP networks [that] requires servers to forward packets to mobile hosts and to maintain information pertaining to a mobile host's location in the network." (Jue, Abstract). That is, post-registration activities.

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Tiedmann relates to a cellular telephone "system for increasing the reliability of the cellular telephone system in environments having substantial multipath propagation or under conditions wherein a large number of mobile telephone units simultaneously attempt to access a base station." (Tiedmann 1:18-24). Specifically, Tiedmann relates to "[reducing] interference between multiple spread-spectrum transmitters operating simultaneously . . . ." (Tiedmann 3:12-15). Tiedmann appears to be completely unrelated to Applicant's invention.

Perkins II recites that "Mobile IP requires the existence of a network node known as the home agent. Whenever the mobile node is not attached to its home network (and is therefore attached to what is termed a foreign network), the home agent gets all the packets destined for the mobile node and arranges to deliver them to the mobile node's current point of attachment." (Perkins, "*Mobile Networking through Mobile IP*," at p. 59 (*Perkins II*)). That is, Perkins does not address home agent inoperability.

Fehnel recites "an object . . . to provide methods and systems for generating a current time of day in a cellular radiotelephone. (Fehnel 2:20-22). Fehnel was cited for this element. Fehnel does not relate to Home Agent initialization before and initial registration attempt.

Claims 4-6 depend directly or indirectly from Independent Claim 1. Claims 12-14 depend directly or indirectly from Independent Claim 10. Claims 18-10 depend directly or indirectly from Independent Claim 15. Because Ton in view of *Perkins I* does not provide a *prima facie* case of obviousness with respect to Independent Claims 1 and 15, the addition of supplemental references, as respectfully submitted, does not cure the deficiency of the lack of a *prima facie* showing of obviousness as to the claims that depend from these independent claims. Accordingly, Applicant respectfully requests that the rejection of these claims be withdrawn.

Claims 12-14 depend directly or indirectly from Independent Claim 10. Because Ton, in view of *Perkins I*, in further view of Troxel does not provide a *prima facie* showing of obviousness with respect to Independent Claim 10, the addition of supplemental references, as respectfully submitted, does not cure the deficiency of the lack of *prima facie* case of obviousness as to the claims that dependent from Independent Claim 10. Accordingly, Applicant respectfully requests that the rejection of these claims be withdrawn.

F.   the required findings under "same field of endeavor" test not met

Applicant respectfully submits that the elements for a rejection based upon a "same field of endeavor" is not provided. Generally, the clause is used summarily, such as "[i]n the same field of endeavor, [the reference] clearly discloses . . . ." (*see, e.g.,* Final Office Action at pages 5, 9, 11).

The test requires that "Office personnel must resolve the Graham factual inquiries. Then, Office personnel must articulate the following: (1)a finding that the scope and content of the prior art, whether in the same field of endeavor as that of the applicant's invention or a different field of endeavor, included a similar or analogous device (method, or product); (2)a finding that there were design incentives or market forces which would have prompted adaptation of the known device (method, or product); (3)a finding that the differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the prior art; (4)a finding that one of ordinary skill in the art, in view of the identified design incentives or other market forces, could have implemented the claimed variation of the prior art, and the claimed variation would have been predictable to one of ordinary skill in the art; and (5)whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness." MPEP 2143 at page 2100-136 (Rev. 6, Sept. 2007).

The rationale to support a conclusion that the claimed invention would have been obvious is that design incentives or other market forces could have prompted one of ordinary skill in the art to vary the prior art in a predictable manner to result in the claimed invention. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

G.   Applicant respectfully submits that its claims serve as a blueprint for piecing together the post-initial registration references of *Ton* and *Perkins*, and/or *Ton*, *Perkins*, and *Troxel*

As noted in Applicant's Specification, "because the IP address of its assigned home agent is hard-coded in its memory, if the assigned home agent is not operational (not an uncommon event) when the subscriber unit attempts registration, a failure in registration results. This failure

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in registration will preclude the subscriber unit from receiving IP communication service from its cellular system provider. The corresponding subscriber will immediately recognize this failure and will take steps to remedy this failure. An immediate remedy for this problem will be to contact the service provider. However, the service provider cannot remedy this problem without receiving and reprogramming the phone." (Specification at p. 2, *ll.* 22-27 to p. 3, *ll.* 1-6).

The post-initial registration devices of Ton, *Perkins*, and/or Troxel do not address the frustration of being unable to register with the cellular network, but subsequent data service failures subsequent to the initial registration in which a service provider does not to receive and reprogram a device. The references do not address this problem. Instead, the Final Office Action points to post-registration failure-recovery elements in the references, such as home agent storage, and without suggestion or motivation from these references, turns to Applicant's own disclosure for such a suggestion or motivation.

The Federal Circuit has noted that "[i]f identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability. To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." *In re Rouffet*, 149 F.3d 1350, 1356 (Fed. Cir. 1998) (citations omitted); *In re Translogic Technology, Inc.*, 504 F.3d 1249 (Fed Cir 2007) (post-*KSR* opinion citing *In re Rouffet* with approval).

Applicant respectfully submits that the hypothetical combination of the post-attachment redundancy of Ton in view of the post-attachment redundancy of *Perkins I*, or the various references further cited, would not achieve Applicant's claimed invention of dependent Claims 4-6, which depend directly or indirectly from Independent Claim 1, dependent Claims 12-14,

which depend directly or indirectly from Claim 10, and dependent Claims 18-20, which depend directly or indirectly from Independent Claim 15.

Applicant respectfully submits that the cited hypothetical combinations of Ton and *Perkins I*, and/or Ton, *Perkins I*, and Troxel do not teach or suggest all of Applicant's limitations as set out in its Independent claims, and accordingly to Applicant's dependent claims that depend therefrom, as shown in the above discussion.

3.   Conclusion

As a result of the foregoing, the Applicant respectfully submits that Claims 1-7 and 10-21 in the Application are in condition for allowance, and respectfully requests allowance of such Claims.

If any issues arise, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ksmith@texaspatents.com.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Garlick Harrison & Markison Deposit Account No. 50-2126.

Respectfully submitted,

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